

## CLAIMS

What is claimed is:

1. A computer implemented method for predicting probe response comprising  
relating a sequence dependent parameter with probe response; and  
5 predicting probe response for a value of the sequence dependent  
parameter.
2. The method of Claim 1 wherein the sequence dependent parameter is  $\Delta G^*$ ,  
wherein  $\Delta G^*$  is a free energy barrier.  
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3. The method of Claim 2 wherein the probe response is the  $\ln(I)/\ln(T)$  slope,  
wherein, the I is the intensity in a complex background and T is target level.
4. The method of Claim 3 wherein the relationship between probe response and  $\Delta G^*$   
15 is established empirically.
5. The method of Claim 4 wherein the  $\Delta G^*$  is predicted using a model relating  $\Delta G^*$   
to probe sequence.
- 20 6. The method of Claim 5 wherein the model is established by relating intensity to  
target levels using the Langmuir adsorption isotherm model in experimental data  
in simple background to extract sequence dependent parameters from the  
experimental data.